

ABSTRACT

A method and system for multicast network transmissions dynamically sets response time parameters for handling

5 negative acknowledgments (NAKs). When the sender receives a NAK for a lost packet, it returns an NAK confirmation (NCF), waits for a back-off time before sending requested repair data, and then waits for a "linger time" during which the sender does not respond to other NAKs for the same lost
10 packet. The back-off time and the linger time are dynamically set according to the position of the requested sequence number in the sender's transmit window such that the back-off time is shorter when the requested data is closer to being flushed out of the transmit window. After receiving the NCF, the receiver
15 waits for a timeout period and resends the NAK if no repair data is received. The timeout period for data receipt is dynamically set according to a statistical average time for receiving repair data from the sender and the estimated sender's transmit window size.

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